



**FIRE SAFETY REQUIREMENTS FOR STORAGE OF
CATEGORY 5 DANGEROUS GOODS IN ABOVEGROUND TANKS**
使用地面貯槽貯存第 5 類危險品 之消防安全規定

1. The dangerous goods store constructed of fire resisting materials throughout shall be provided in accordance with plans approved by the Director of Fire Services.
須依照消防處處長所批准的圖則設置全部用抗火材料建造之危險品倉庫。
2. The actual layout of the installation shall be in accordance with plans approved by the Director of Fire Services.
該設備的實際佈置必須符合消防處處長所批准的圖則。
3. Plans of the store shall be approved by the Building Authority and the Director of Fire Services before construction work is commenced.
倉庫圖則須經建築事務監督及消防處處長審批。如圖則未經批准，建築工程不得動工。
4. The ultimate licensee shall confirm in writing to the Director of Fire Services the receipt of the approved plans and the set of fire safety requirements (Applicable to applications submitted by agents).
持牌人必須以書面向消防處處長証實已收到有關批准圖則及消防安全規定(此項規定只適用於經代理人的申請)。
5. Door openings of the store shall be fitted with self-closing doors having a fire resistance rating of not less than one hour.
該倉庫須設有不少於 1 小時抗火時效的自掩門。

6. The tank and pump shall be installed in conformity with Part VI of the Dangerous Goods (General) Regulations, Chapter 295B, Laws of Hong Kong and plans submitted to Fire Services Department.

For storage of Category 5 Class 1 or 2 dangerous goods, the tank shall be tested by a recognized Marine Engineer / Surveyor before putting into commission and a Certificate in respect of suitability shall be obtained and submitted to the Director of Fire Services.

For storage of Category 5 Class 3 dangerous goods, the tank shall be tested by a Competent Person¹ for leakage hydraulically or pneumatically at a minimum pressure of 70kPa for a period of not less than one hour before putting into commission. A Certificate in respect of suitability shall be obtained and submitted to the Director of Fire Services. The owner(s) of such tank shall provide a full set of designs and specifications of such tank, including the thickness of the wall, the dimensions and volume of the tank and the material used, etc to the Director of Fire Services. The aforementioned testing standards do not apply to (i) any tank which is classified as the “Oil storage installation” within the meaning of section 2 of the Buildings Ordinance (Cap 123) and (ii) any fuel tank with a capacity of 500 litres or below storing Category 5 Class 3 dangerous goods for the purposes of supplying fuel to emergency generator for any fire service installation or equipment or for an emergency power backup facility.

¹ Competent Person refers to a Registered Professional Engineer in the “Marine & Naval Architecture Discipline” or “Mechanical Discipline” or an “Authorized Surveyor” under the Merchant Shipping (Local Vessels) Ordinance (Cap 548) or the “Boiler Inspector” under Boilers and Pressure Vessels Ordinance (Cap 56).

合資格人士指「輪機暨造船學界別」或「機械界別」的註冊專業工程師，或《商船(本地船隻)條例》(第 548 章) 下獲委任的「特許驗船師」，或《鍋爐及壓力容器條例》(第 56 章) 下獲委任的「鍋爐檢驗師」。

貯槽及油泵的裝置須符合香港法例第 295B 章《危險品(一般)規例》第 VI 部的規定。其圖則須呈交消防處審核。

用於貯存第 5 類第 1 及 2 分類危險品的貯槽在投入使用前，須由認可海事工程師 / 驗船師檢驗，並將證明為適合的證明書送交消防處處長。

用於貯存第 5 類第 3 分類危險品的貯槽在投入使用前，須由合資格人士¹以不少於 1 小時及不低於 70 千帕斯卡的壓力，進行液壓式或氣壓式防漏測試，並將證明為適合的證明書送交消防處處長。貯槽的擁有人須向消防處處長提交文件，臚列有關貯槽的完整資料，包括貯槽壁的厚度、貯槽尺寸、容量和物料等。以上測試準則並不適用於 (i)《建築物條例》(第 123 章) 第二條所指的「貯油裝置」及 (ii) 用作貯存第 5 類第 3 分類危險品的貯槽，容量為 500 公升或以下，並用作供應燃油予消防裝置及設備或緊急電力備用設施的應急發電機。

7. The tank shall be fitted with a vapour-escape pipe with fine brass wire gauze fitted to the opening which shall be terminated outside the fuel tank room.

貯槽須裝有一條溢氣管，其出口處須裝設幼銅絲網及設置在貯油房之外。

8. The tanks shall be firmly fixed onto the ground.

該貯槽必須牢固建築於地上。

9. For outdoor storage, a bund of at least 100% of the proposed tank's capacity shall be provided.

露天貯存所須設有最少能容納貯槽內全部危險物品的圍壘。

10. Shading of non-combustible material shall be provided for any dispensing pump and dispenser nozzle to keep them away from direct rays of the sun.

放油泵及放油鎗須以不可燃物質造成的陽蓬遮蔽陽光的直照。

11. For indoor storage, the tank shall be placed inside a fire resisting room of at least 2-hour FRR with a door sill capable of containing 100% of the tank capacity. The room shall be ventilated to open air and the door opening shall be fitted with a self-closing door having a fire resistance rating of not less than one hour.

在室內貯存的貯槽須安置於抗火最少2小時及與外間空氣直接相通的防火房間內。該房間須設有不少於1小時抗火時效的自掩門，而門口則須設能夠容納該貯槽全部貯油量之門檻。

12. All fuel tank room except those designed with manual refilling facilities therein shall have the filling point terminated outside the room.

除房間內設有手動供油設施，所有入油口須設置在貯油房之外。

13. Natural or mechanical ventilation shall be provided to ensure adequate air movement at high and low levels of dangerous goods storage.

須以自然或機械通風方式確保該倉庫的高低層位置有足夠的空氣流動。

14. For natural ventilation, fixed and permanent openings at high and low levels shall be provided. A minimum of five air changes per hour or ventilation openings having a total area equivalent to 1-3% of the total area of the walls and roof of the store shall be provided.

如採用自然通風方式，須裝置固定永久性的高低氣窗。須提供不少於每小時五次空氣更換或通風口的總面積相等於所有牆身及屋頂面積總和的百分之一至三。

15. High and low ventilators for natural ventilation covered internally with metal wire gauze of nominal aperture size not greater than 12mm and externally with non-corrodible metal gratings shall be provided for the store.

該倉庫須設置高低氣窗，窗內安裝金屬網，網眼不得超逾12毫米，窗外安裝抗蝕金屬柵欄。

16. Any mechanical ventilation system, if provided, shall be in accordance with the relevant requirements stipulated in FSD Circular Letter No.4/96 Part IX. Details/plans of the system shall be submitted to the Ventilation Division of this Department for approval prior to the commencement of work.

如裝有任何機械通風系統，該系統必須符合消防處通函第 4/96 號第 XI 部的規定，並須在動工前，將該系統的詳情／圖則送交本處通風系統課審核。

17. An automatic closing device shall be provided to the high and low ventilators of the store by the provision of fire curtains/dampers/shutters equipped with electro-thermal link released by a signal from an appropriate type heat/smoke detector fixed on the ceiling to actuate the device. For heat detectors, the actuation temperature shall be rated at 54°C to 65°C and the control panel shall be located outside the store. The device shall be installed by a Registered Fire Service Installation Contractor and the copy of certificate issued shall be forwarded to the Director of Fire Services.

該倉庫內的高低氣窗須設有使用防火幕／防火閘／防火捲閘的自動關閉裝置。這些裝置的啟動須由裝在天花上的熱力／煙霧偵測器控制。熱力偵測器的啟動溫度應為攝氏五十四至六十五度之間。裝置的控制板須設於倉庫外。該裝置須由註冊消防裝置承辦商安裝，並須向消防處處長呈交證書複本。

18. The low level ventilators shall be situated immediately above the level of the door sill.

低氣窗的位置應稍高於門檻。

19. Any alteration to fire service installations on the premises shall be carried out by a Registered Fire Service Installation Contractor appropriate to class, and amended fire service installation plan shall be submitted to the Director of Fire Services, prior to the commencement of work. On completion of the alteration, the Director of Fire Services shall be informed in writing, and the installation shall be tested in accordance with the relevant requirements stipulated in the Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment.

該處所的消防裝置改裝工程必須由適當級別的註冊消防裝置承辦商負責進行，並須於動工前，將修訂之消防裝置圖則送交消防處處長審核。改裝工程完竣後，必須以書面通知消防處處長及按裝置及設備之檢查、測試及保養守則內的有關規定測試該消防裝置。

20. Sprinkler heads at the store, if any, shall be blank off.

如該倉庫有消防花灑頭，須予以封閉。

21. A fixed automatically operated appliance, e.g. a sprayer unit, containing an inert extinguishing medium of a quantity adequate for the protection of the store shall be provided. Indication of the automatic protection shall be provided on the door of the store. The appliance shall be installed by a Registered Fire Service Installation Contractor and the copy of certificate issued to be forwarded to the Director of Fire Services.

該倉庫內須提供認可的自動操作固定器具，例如噴灑器。該器具須有足夠分量的惰性滅火劑以保護有關的倉庫。該倉門上須顯示倉庫內有關器具的類型。該器具須由註冊消防裝置承辦商安裝，並須向消防處處長呈交證書複本。

22. One 4.5 kg CO₂ type fire extinguisher and two buckets of dry sand shall be provided and allocated near the pump/tank.

須在油泵 / 貯槽附近放置 4.5 公斤二氧化碳滅火筒一具及乾沙兩桶。

23. Any fixed electrical installation shall be inspected, tested and certified by an electrical worker/contractor registered by the Director of Electrical and Mechanical Services. A copy of the “Work Completion Certificate” (WR1) shall be forwarded to the Director of Fire Services as proof of compliance.

所有固定電力裝置須經機電工程署署長註冊的註冊電業工程人員或註冊電業承辦商檢試及証明，並向消防處處長呈交“完工證明書（WR1）”複本。

24. All electrical installations including switchgears shall be sited outside the store. If electrical installations or equipment are required to be installed inside the store, they should be in compliance with BS EN 60079 or other relevant standards where appropriate.

所電器裝置包括電掣須裝置於倉庫外。如在倉庫內裝置有電力裝置或設備，該等裝置及設備須符合 BS EN 60079 或其他有關相等的標準。

25. Any fixed fire service installations, if provided, in the store (including heat/smoke detector heads and mounting bases) shall be in accordance with the relevant FOC Rules/NFPA Codes for hazardous areas as appropriate.

該倉庫內如設有任何固定消防裝置（包括熱力 / 煙霧感應器及安裝基座），該裝置須符合英國 FOC 或美國 NFPA 有關危險區域的消防守則。

26. All electrical wiring shall be of Mineral Insulated Copper Sheathed cable and, where protection is required, with industrial type glands and heavy gauge conduit fittings.

所有電線須為礦物絕緣銅套電纜，並在需要時以工業類索頭連接及厚身電線導管保護。

27. Lighting fittings shall be of totally enclosed type to BS EN 60529 standard with protection not less than IP 44 and provided with high quality gasket.

照明裝置須為全密封型，須符合英國標準 BS EN 60529 的規定，並有不低於 IP 44 的保護程度及配有高品質的封口墊。

28. For outdoor storage, lightning rod and earthing connections shall be provided to the tanks. Any earthing system shall be inspected, tested and certified by an electrical worker/contractor registered by the Director of Electrical and Mechanical Services. A copy of the “Work Completion Certificate” (WR1) shall be forwarded to the Director of Fire Services as proof of compliance.

露天貯存所的貯槽須設有妥善的避雷針裝置及接地導線。所有接地導線裝置須經機電工程署署長註冊的註冊電業工程人員或註冊電業承辦商檢試及証明，並向消防處處長呈交“完工證明書（WR1）”複本。

29. Storage above ground shall be indicated by an approved standard sign fixed to the external wall adjacent to the lobby window opening of the store. The sign shall not obstruct access or ventilation to the lobby. The sign shall be painted with red-reflective materials on a white background (Please see attached sketch).

須將已獲認可標準的指示牌固定在該倉庫近走廊窗外的外牆上以指示該危險品貯存的地方位於地平面以上的樓層。該指示牌不可阻礙有關走廊的通道及通風狀況。該指示牌須為白色背景，並用紅色反光物料塗上（請參閱附上的圖示）。

30. “NO SMOKING”, “不准吸煙” notices and the category of the dangerous goods in English and Chinese characters, in words being not less than 120mm in height, shall be painted on doors of the store or a conspicuous position for outdoor storage.

須將“不准吸煙”、“NO SMOKING”告示及危險品類別以不少於 120 毫米高的中英文字體髹在倉門之上或在露天貯存所的一個當眼位置。

31. A flammable dangerous goods pictorial plate, which may be purchased from the Licensing and Certification Command Headquarters, shall be provided and fixed at a prominent position of the main entrance to the store.

須將易燃性危險物品圖示牌一個固定於該倉庫主要入口的當眼位置，該圖示牌可向牌照及審批總區總部購買。

32. The store shall be kept locked when not being attended.

在沒有人在工作時，該倉庫須保持上鎖。

33. The store and its nearby area shall be clear of rubbish and maintained in a clean and tidy condition.
該倉庫及其附近地方不得有垃圾，並須保持整潔。
34. The store shall not be used as stowage for any other articles or goods.
不得使用該倉庫貯存任何其他物件或貨物。
35. No illegal shades over any dangerous goods storage area shall be erected.
不得在危險品貯存地方搭建非法陽蓬。
36. Ventilation openings shall not be obstructed on either side by container stacks, dirt or rubbish.
通風口的兩面不得被堆放著的盛器、灰塵或垃圾阻塞。
37. No dangerous goods shall be stored in the aboveground tank before a licence is issued by the Director of Fire Services.
在消防處處長發出危險品牌照之前，不得使用該地面貯槽貯存危險品。
38. Lightning rod and earthing connections shall be provided to the store.
該倉應設有妥善的避雷針裝置及接地導線。

attached sketch (an example showing a sign for Category 5 DG)

附上的圖示 (例子顯示一個第 5 類危險品的指示牌)

